Amendments to the Specification:

Please replace the paragraph beginning on page 2, line 13, with the following rewritten paragraph:

The above-described objectives are achieved by the following aspects of ~~the present invention~~ embodiments.

Please replace the paragraph beginning on page 13, line 25, with the following rewritten paragraph:

As a particular case, the case when f3 = f4 = d/2 will be considered. This corresponds to a so-called 4f optical system characterized in that: the lateral magnification of an image transmitted is constant; and even if the positions of an object and its image change on the optical axis, their sum (corresponding to $s_i + s_o$ in Fig. 2) is constant and equal to 2f ($s_i + s_o$ = 2f = constant). If the polygon mirror 18 rotates counterclockwise by an angle of θ about the point located at a distance of $f + \Delta$ from the lens 30A on the optical axis thereof, both the object and reference beams are deflected by an angle of 2θ. If the distances from the points where the deflected object and reference beams traverse the optical axis to the principal point of the lens 30A are denoted s_i and s_i', respectively, the relationship among these distances, ϕ (an angle between the beam before being deflected and the optical axis), Δ, and f can be obtained from geometrical considerations as follows.

$s_i = f - (\tan\phi - \tan\Psi)/\{\tan\Psi(1 + \tan\phi)\}\Delta$

$s_i' = f + (\tan\Psi' - \tan\phi)/\{\tan\Psi'(1 - \tan\phi)\}\Delta$

where, $\Psi \equiv \phi - 2\theta$

~~$\Psi \equiv \phi + 2\theta$~~

$\Psi' \equiv \phi + 2\theta$

Please replace the paragraph beginning on page 14, line 21, with the following rewritten paragraph:

If, assuming that the F-number of a lens (numerical aperture) is large, the thin lens and paraxial approximations are applied, then the positions of the points where the object and reference beams traverse the optical axis again behind the lens 30B (distances from the principal point of the lens 30B) are given by the following equations.

$s_o = f - (\tan\phi - \tan\Psi)/\{\tan\Psi(1 + \tan\phi)\}\Delta$

$\cancel{s_e' = f - (\tan\Psi' - \tan\phi)/\{\tan\Psi'(1 - \tan\phi)\}\Delta}$

$\underline{s_o' = f + (\tan\Psi' - \tan\phi)/\{\tan\Psi'(1 - \tan\phi)\}\Delta}$

Please replace the paragraph beginning on page 18, line 10, with the following rewritten paragraph:

In this case, if the focal length of the relay lens 42 is denoted f', the distance L' from the polygon mirror 18 is set so as to be larger than the focal length f' of the relay lens 42. The light beam passing through the relay lens 42 is focused at the distance s' that meets the following equation.

$\cancel{1/L' + 1/s' = 1/F'}$

$\underline{1/L' + 1/s' = 1/f'}$

Please replace the paragraph beginning on page 23, line 14, with the following rewritten paragraph:

Another case will be considered in which the first tracking mirror 70 in Fig. 10 is displaced by the amount X_1 in the right direction in the drawing and at the same time, as shown in Fig. 11, ~~the first tracking mirror 70~~ the second tracking mirror 72 is displaced by an amount of X_2 in the direction indicated in the drawing.

Please replace the paragraph beginning on page 25, line 13, with the following rewritten paragraph:

In the above-described embodiment, there are two recording beams for which the first and second tracking mirrors 70 and 72 are provided, but the invention is not limited to this number of recording beams. The number of recording beams may be set to three or more. In the case of three recording beams, for example, each mirror is set such that: the first tracking mirror reflects only the first recording beam; the second tracking mirror reflects the first recording beam reflected by the first tracking mirror and the second recording beam; and the third tracking mirror reflects the first recording beam reflected by the ~~second~~ first tracking mirror, the second recording beam reflected by the second tracking mirror, and the third recording beam.